



# TOWN OF WINCHESTER

INCORPORATED JULY 2<sup>ND</sup> 1753

1 Richmond Road • Winchester, New Hampshire 03470

Voice: (603) 239-4951 • Fax: (603) 239-4710 • TDD Access: Relay NH 1-800-735-2964  
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## **SCOPE OF WORK FOR THE MANNING HILL WATER MAIN EXTENSION**

- Equipment and labor to cut asphalt, cut water main, tap water main, dig, install, compact at a 6' bury approximately 1,100 linear feet of 8" ductile iron water main. Project will start at 26 Manning Hill Road at existing fire hydrant location and continue to the North bound side of Route 10 continuing to 3 Wetherby Drive. Pipe will be laid within the NH DOT 50' right of way, laying pipe within existing 4 -3/4" water services existing trenches. The contractor can expect approximately 200 linear feet of the 1,100 feet to be directionally drilled. Water main will be laid behind existing telephone poles to allow use of trench box.
- Installation of appropriate 1 – 6" hymax coupling, 6" DI reducers, 8" x 8" x 6" hydrant DI Tee, 1 -6" hydrant gate valve, 1 – 8" inline water gate valve, mechanical restraints, and all other associated parts for connection to existing 6" AC water main located at 26 Manning Hill Road.
- Installation of additional 2 – fire hydrants (approximately 550 feet apart), 2 – 6" hydrant gates valves, 1 – 8" inline water gate valve, 1 – 8" x 8" x 6" DI hydrant Tee, 1 – 8" x 6" DI reducer, including 6" DI pipe connecting hydrants to 8" ductile iron water main including mechanical restraints.
- Installing 6 new water services that include saddles, tapping, corporations, curbs, CTS tubing, rods, boxes, and associated connection required to existing water services. The following is a brief description of the services to be installed.
  1. Service will be 1" located on the 8" DI water main directly after the connection to the existing 6" water main. This service will be for pressure testing and disinfection of new water main. The service will be removed during the removal of existing fire hydrant and services, the 1' corporation shall be turned off and capped with 1" CTS tube being removed.



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2. Service will be 1" connected to 27 Manning Hill Road. This service will be directionally drilled across state highway Route 10 by private contractor provided by town. Job contractor will provide all excavating required for directional drilling, will locate existing water service (with the assistance of the Winchester Water Department), install saddle, corporation, tap main, pull new 1" CTS service across after 2" plastic sleeve is in place. The contractor will set curb stop valve, box, rod to 27 Manning Hill at property edge and connect to existing 3/4" service.
3. Service will be 1" connected to 26 Manning Hill Road. This service will require installing saddle, corporation, tapping main, install CTS tube, setting curb stop valve, rod, and box at property edge and properly connect new water service to existing 3/4" water service feeding property.
4. Service will be 1" connected to 31 Manning Hill Road. This service will be directionally drilled across state highway Route 10 by contractor provided by the Town of Winchester. Contractor will provide all excavating required for directional drilling, will locate existing private water service (with the assistance of the Winchester Water Department), install saddle, corporation, tap main, pull new 1" CTS service across after 2" plastic sleeve is in place. The contractor will set curb stop valve, box, rod to 31 Manning Hill at property edge. The contractor will professionally install 1" CTS tube from new curb stop valve continuing approximately 130 feet to foundation of 31 Manning Hill Rd., core a 2" hole through foundation wall, install 1" CTS tube through wall and plug with water-tight material provided by town. The town shall be responsible to properly connect new water service inside of foundation wall to existing plumbing.
5. The Water service feeding 46 and 48 Manning Hill shall be shared and 2" CTS tube size at designated location determined by the Town of Winchester. This service will require installing saddle, corporation, tapping DI main, running 2" CTS tube, setting curb stop valve, foot piece, Erie box, SS rod, continuing approximately 130 feet into





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property with 2" CTS tube, installing a 2" compression x 2" MIP fitting, 2" brass tee, 2 - 2" x 3/4" brass reducer, 2 - 3/4" compression x 3/4" MIP and connecting to existing 3/4" services with 3/4 CTS tube.

6. Service will be 2" connected to Wetherby Drive. This service will require installing appropriate saddle, corporation, tapping DI main, running 2" CTS tube, curb stop valve, foot piece, Erie box, SS rod, running 2" CTS tubing, and connecting to existing 2" water service feeding property.
- The contractor will be responsible for pressure testing and disinfecting water main per town requirements (specifications) included. The Town will provide water main, gate valves, hydrants, saddles, corporation valves, curb stop valves, gate boxes, Erie boxes, rods, stainless steel inserts, CTS tubing, mechanical restraints, DI Tees, DI reducers, DI bends, and other necessary fittings to make service connections. These materials shall be installed per specifications provided.
  - The town will provide bedding material, bank run material, crushed gravel, stone for hydrant drains, thrust blocks, loam, grass seed and straw as needed for water main and services installation. Contractor will be responsible to remove any debris from job site and transport to Town's gravel pit, including trucking in sand, bank run gravel, and crushed gravel from Town's gravel pit to job site.
  - The town will provide directional drilling contractor. The job contractor is responsible for excavations to perform directional drilling and flexibility with scheduling to allow directional drillings. The water main will be directionally drilled at the cranberry bog. between 46 Manning Hill and Wetherby Drive, water services for 27 and 31 Manning Hill will be directionally drill in addition to water main.
  - The contractor will back fill with existing material after bedding pipe (per specifications), compact trench and meet existing grades.
  - The Town will provide crushed gravel to contractor for driveways that have been disturbed during pipe installation.



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- The contractor will be responsible to remove the 4 - ¾" water services feeding 26, 27, 46, 48 Manning Hill and Wetherby Drive from existing 6" AC water main. The existing fire hydrant located at 26 Manning Hill (start of project) will be removed with this section of the 6" AC main being replaced with a new section of 6" C909 from old removed services to new 8" DI water gate installed by contractor.
- The contractor will be responsible to prepare trenches at 26 and 46 Manning Hill Road for pavement when new main is active, and all homes are connected to main. The town will provide paving by sperate contractor.
- The contractor will be responsible to provide trench box as needed to lay water main.
- When disturbing any lawn areas, the contractor will remove topsoil and set aside for reuse, in the event this is not possible the Town of Winchester will provide additional topsoil, seed and hay as required to restore area to original state. Contractor will be responsible to preform this work.
- The contractor shall install erosion control fence, straw matting and grass seed provided by the Town of Winchester at designated area for directional drilling location across the cranberry bog.
- The Town of Winchester will provide traffic control, when necessary, with the coordination of the contractor.



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## 9.0 Pressure and Leakage Test

- A. This test shall be performed in accordance with AWWA most recent recommended procedure. Water Department personnel must witness such testing. All services and mains larger than 2" shall be tested.
- B. The pressure and leakage test shall consist of first raising the water pressure to a pressure equal to the rating of the pipe or 150psi whichever is highest. While maintaining this pressure, the Contractor shall make a leakage test by metering the flow of water into the pipe. Current AWWA recommended procedures should be followed.
- C. If the section fails to pass the pressure and leakage test, the Contractor shall do everything necessary to locate, uncover, and repair or replace the defective pipe, fitting or joint, all at his own expense and without extension of time for completion of the work. Additional tests and repairs shall be made until the section passes the specified test.
- D. If, in the judgment of the Water Department, it is impracticable to follow the foregoing procedure exactly for any reason, modifications in the procedure shall be made as required and approved, but in any event the Contractor shall be responsible for the ultimate tightness of the line within the above leakage and pressure requirements.





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## 10.0 Disinfection of Mains

- A. The Contractor shall disinfect all lines carrying potable water.
  - B. The Contractor shall furnish all equipment and materials necessary to do the work of disinfecting, and shall perform the work in accordance with the procedure outlined in the AWWA Standard for Disinfecting Water Mains.
- Rules and Regulations Winchester Water Department Winchester NH 03470
- C. The dosage shall be not less than 10 ppm after a contact period of not less than 24 hours. Calculation of the required dosage shall be submitted for approval to the Water Department prior to chlorine injection. Injected chlorine shall remain in the mains less than 72 hours.
  - D. After treatment, the main shall be flushed with clean water until the residual chlorine content does not exceed 0.2 ppm.
  - E. During the disinfection period, care shall be exercised to prevent contamination of water in the existing mains. No valves shall be operated without the knowledge and permission of the Water Department.
  - F. The Contractor shall dispose of the water used in disinfecting and flushing in an approved manner.
  - G. The Contractor shall provide, as an affidavit of compliance, bacteriological test results certifying the water sampled from the water main to be free from coli form.